State of Utah

Department of Environmental Quality

Dianne R. Nielson, Ph.D.
Executive Director

DIVISION OF AIR QUALITY
Richard W. Sprott
Director

OLENE S. WALKER
Governor

GAYLE F. McKEACHNIE
Lieutenant Governor

Site ID: 12103

Title V Operating Permit

PERMIT NUMBER: 700061001(DRAFT)
DATE OF PERMIT: (Assigned in Final Permit)
Date of Last Revision: (Assigned in Final Permit)

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Questar Pipeline Company
1140 West 200 South
PO Box 45360
Salt Lake City, UT 84147-0450

Permitted Location:

Oak Spring Turbine Compressor Station
6.5 miles west of Spring Glen
Carbon County, UT

UTM coordinates: 4,390,000 meters Northing, 501,700 meters Easting
SIC code: 4922

ABSTRACT

Questar Pipeline's Oak Spring Compressor Company is a natural gas pipeline compression facility located approximately 6.5 miles west of Spring Glen, Carbon County, Utah. Three turbines and associated equipment are operated to meet demand of the pipeline system. A fourth generator will be used as an emergency generator for backup power. Operations are controlled by Questar Regulated Services Co. in Salt Lake City. There is no air pollution control equipment at this source. All equipment is fired on natural gas from the pipeline. This compression station is a major source of nitrogen oxide (NO_x).

UTAH AIR QUALITY BOARD

By:

Richard W. Sprott, Executive Secretary

Prepared By:

Svetlana Kopytkovskiy

Operating Permit History

12/11/2003 - Permit drafted	Action initiated by an initial operating permit application	

Table of Contents

Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

Section I: General Provisions

I.A. **Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B. **Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C. **Duty to Comply.**

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D. **Permit Expiration and Renewal.**

I.D.1 **This permit is issued for a fixed term of five years and expires on (Assigned in Final Permit)**. (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due by (Assigned in Final Permit). An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E. **Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F. **Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G. **Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H. **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I. **Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J. **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K. **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L. **Compliance Certification.**

I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than **January 11, 2005** and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision

I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.

I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
EPA, Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

I.M. **Permit Shield.**

I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:

I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))

I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))

I.M.2 Nothing in this permit shall alter or affect any of the following:

I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))

I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b)

I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N. **Emergency Provision.**

I.N.1 An "emergency" is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-

based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))

I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))

I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))

I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))

I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O. **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P. **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q. **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R. **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S. **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample,

measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii)

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

I.S.1.b.5 The results of such analyses.

I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.

I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

I.S.2.a Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i)

I.S.2.c The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. **Prompt, as used in this condition, shall be defined as written notification within 14 days**. Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:

Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and
Environmental Justice (mail code 8ENF)
999 18th Street, Suite 300
Denver, CO 80202-2466

For reports, notifications, or other correspondence related to permit modifications, applications, etc.

Environmental Protection Agency, Region VIII
Office of Partnerships & Regulatory Assistance
Air & Radiation Program (mail code 8P-AR)
999 18th Street, Suite 300
Denver, CO 80202-2466
Phone: 303-312-6440

I.T. **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U. **Inventory Requirements.**

I.U.1 An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.U.2 A Hazardous Air Pollutant Inventory shall be submitted in accordance with the procedures of R307-155, Hazardous Air Pollutant Inventory. (R307-155)

Section II: SPECIAL PROVISIONS

II.A. **Emission Unit(s) Permitted to Discharge Air Contaminants.**

(R307-415-4(3)(a) and R307-415-4(4))

II.A.1 **Natural Gas Turbine Compressor** (designated as 1)
Unit Description: natural gas-fired turbine rated 5,940 hp.

II.A.2 **Natural Gas Turbine Compressor** (designated as 2)
Unit Description: natural gas-fired turbine rated 7,250 hp.

II.A.3 **Natural Gas Turbine Compressor** (designated as 3)
Unit Description: natural gas-fired turbine rated 7,700 hp.

II.A.4 **Back-up Generator** (designated as 4)
Unit Description: 1,040 kW back-up generator fueled by natural gas.

II.B. **Requirements and limitations.**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated: (R307-415-6a(1))

II.B.1 **Conditions on permitted source (Source-wide)**

II.B.1.a **Condition:**

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any permitted plant equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under 40 CFR 60.11(d) and R307-405-1; condition originated in DAQE-424-01]

II.B.1.a.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.a.2 **Recordkeeping:**

Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2 **Conditions on Natural Gas Turbine Compressor (1)**

II.B.2.a **Condition:**

Visible emissions shall be no greater than 10 % opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.2.a.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.2.a.2 **Recordkeeping:**

In lieu of monitoring via visible emission observations, the permittee shall keep one of the following sets of records for each affected emission unit, as applicable:

(1) Documentation that the emission unit can only burn pipeline quality natural gas;
(2) Documentation that the fuels other than pipeline quality natural gas cannot be supplied to the emission unit without modification of the fuel supply system; or
(3) Fuel bills or fuel meter readings that demonstrate only pipeline quality natural gas are combusted in the emission unit.

The permittee shall keep a log, which includes the location and description of each affected emission unit. For each affected emission unit the log shall include the type of records that will be used in lieu of monitoring via visible emission observations. If fuel bills or fuel meter readings will be used in lieu of monitoring via visible emission observations, the permittee shall review fuel bills or fuel meter readings once per quarter and record in the log the types of fuel combusted. The records and log required by this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.b **Condition:**

Emissions of CO shall be no greater than 8.05 lb/hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.2.b.1 **Monitoring:**

A. CO emission testing shall be performed on each affected unit at least once every three years based on the date of the most recent test, using a portable analyzer or testing instrument capable of detection emissions of the pollutant being tested at the concentrations necessary to determine compliance. The tested unit shall be operated under normal conditions and at a minimum of 90% of the maximum production or throughput achieved since the last required test. A testing protocol shall be developed, documented, and used for all tests. At a minimum, the following topics shall be addressed in the protocol:

(a) A description of sampling locations and sample gathering procedures that result in representative and reproducible samples.

(b) Calibration and operation procedures for the analyzer.

(c) Methods used to determine the flow rate, temperature, and other parameters as necessary to demonstrate compliance.

(d) Calculations and other information necessary to convert the analyzer output to the units of the limitation.

The test protocol shall be made available to the Executive Secretary upon request. If the Executive Secretary determines that the protocol does not adequately address the minimum requirements list above, or that the protocol does not provide sufficient assurance that the test results are adequate for demonstrating compliance with the limitation, the Executive Secretary may require the permittee to modify the protocol.

or

B. Stack testing shall be performed as specified here:

(a) Frequency. The unit shall be tested every five years using stack tests. Tests may also be required, if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall submit a copy of this test protocol and notify the Executive Secretary of the date, time, and place of testing. The source test protocol shall be approved by the Executive Secretary prior to the test(s). The source test protocol shall show the proposed test methodologies, stack(s) to be tested. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1 or other methods as approved by the Executive Secretary. In addition, Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

(d) Methods.

(1) 40 CFR 60, Appendix A, Method 10 shall be used to determine CO emissions.

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.2.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.b.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.c **Condition:**

Sulfur content of the fuel shall be no greater than 0.8 % by weight. [Authority granted under 40 CFR 60.333 (Subpart GG); condition originated in 40 CFR 60.333 (Subpart GG)]

II.B.2.c.1 **Monitoring:**

Fuel sulfur content shall be determined using approved ASTM reference methods, or an approved alternative method. The approved reference methods are: ASTM D1072-80, ASTM D3031-81, ASTM D3246-81, ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The Gas Processors Association (GPA) document "Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes", GPA Standard 2377-86 is an approved alternative method.

1. Sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, sulfur monitoring shall be conducted once per quarter for six quarters.

2. If after the monitoring required in item 1, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per year: during first and third quarters of each calendar year.

3. If any sulfur analysis as required in items 1 and 2 above indicate noncompliance with 40 CFR 60.333, the owner/operator shall notify the EPA Region VIII and the Utah State DEQ, DAQ of such excess emissions and the custom schedule shall be re-examined by the EPA Region VIII. Sulfur monitoring shall be conducted weekly during this period when custom fuel schedule monitoring is being re-examined.

4. Stationary gas turbines that use the same supply of pipeline quality natural gas to fuel multiple gas turbines may monitor the fuel sulfur content at a single location. (origin: letter from EPA dated 08/27/2002)

II.B.2.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.c.3 **Reporting:**

The results of the testing shall be submitted semi-annually to the Executive Secretary and to EPA. All reports shall be in accordance with Provision I.S.2 of this permit.

II.B.2.d **Condition:**

Emissions of NO_x shall be no greater than 6.61 lb/hr and 177 ppmdv @ 15% O_2. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.2.d.1 **Monitoring:**

A. NO_x emission testing shall be performed on each affected unit at least once every three years from the most recent test using a portable analyzer or testing instrument capable of detection emissions of the pollutant being tested at the concentrations necessary to determine compliance. The tested unit shall be operated under normal conditions and at a minimum of 90% of the maximum production or throughput achieved since the last required test. A testing protocol shall be developed, documented, and used for all tests. At a minimum, the following topics shall be addressed in the protocol:

(a) A description of sampling locations and sample gathering procedures that result in representative and reproducible samples.

(b) Calibration and operation procedures for the analyzer.

(c) Methods used to determine the flow rate, temperature, and other parameters as necessary to demonstrate compliance.

(d) Calculations and other information necessary to convert the analyzer output to the units of the limitation.

The test protocol shall be made available to the Executive Secretary upon request. If the Executive Secretary determines that the protocol does not adequately address the minimum requirements list above, or that the protocol does not provide sufficient assurance that the test results are adequate for demonstrating compliance with the limitation, the Executive Secretary may require the permittee to modify the protocol.

or

B. Stack testing shall be performed as specified here:

(a) Frequency. The unit shall be tested every five years using stack tests. Tests may also be required, if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall submit a copy of the test protocol and notify the Executive Secretary of the date, time, and place of testing. The source test protocol shall be approved by the Executive Secretary prior to the test(s). The source test protocol shall show the proposed test

methodologies, stack(s) to be tested. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1 or other methods as approved by the Executive Secretary. In addition, Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

(d) Methods.

(1) 40 CFR 60, Appendix A, Methods 20, or 7, 7A, 7B, 7C, 7D, 7E shall be used to determine NO_x emissions.

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (origin: R307-401-6 (BACT))

II.B.2.d.2 **Recordkeeping:**

Results of all monitoring shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.2.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.e **Condition:**

Emissions of NO_x shall not be greater than the concentration calculated by the equation

STD = 0.0150 (14.4/Y) + F where

STD is the allowable NO_x emission in percent by volume, dry, at 15 percent oxygen;
0.0150 is the base emission standard, in percent by volume;
Y is the ratio of fuel consumption (in kJ/hr) over output power (in watts), with Y not to exceed 14.4 (dimensionless); and
F is an allowance for the fuel-bound nitrogen as determined by the following table:

Fuel-bound nitrogen, N, wt%	F, NO_x percent by volume
N<0.015	0
0.015<N<=0.1	0.04N
0.1<N<=0.25	0.004 + 0.0067(N - 0.1)
N>0.25	0.005.

[Authority granted under 40 CFR 60.332 (Subpart GG); condition originated in 40 CFR 60.333 (Subpart GG)]

II.B.2.e.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at least once every five years based on the date of the most recent stack test, or at any other time if directed by the Executive Secretary. If a turbine covered by this condition is replaced, the new turbine shall be tested within 60 days of reaching maximum capacity, but not later than 180 days after initial startup.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d) Methods

(1) 40 CFR 60, Appendix A, Method 20 shall be used to determine the nitrogen oxides and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen;

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine stack gas velocity and volumetric flow rate;

(3) Fuel-bound nitrogen content shall be assumed to be 0 wt%, in accordance with EPA guidance document EMTIC GD-009 dated 3/12/90;

(e) Calculations. The nitrogen oxides emission rate (NO_x) shall be computed for each run using the following equation:

$NO_x=(NO_{xo})\ (Pr/Po)0.5\ e^{19(Ho-0.00633)\ (288°K/Ta)1.53}$ where:

NO_x = emission rate of NO_x at 15% O_2 and ISO standard ambient conditions, volume percent.
NO_{xo} = observed NO_x concentration, ppm by volume.
Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
Po = observed combustor inlet absolute pressure at test, mm Hg.
Ho = observed humidity of ambient air, g H_2O/g air.
e = transcendental constant, 2.718.
Ta = ambient temperature, °K.

To determine mass emission rates (lb/hr, etc.), the pollutant concentration as determined by the appropriate methods above shall be multiplied by the

volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The operational rate during all compliance testing shall be no less than 90% of the maximum rate achieved in the previous three (3) years (origin: 40 CFR 60.335(c), 40 CFR 60.8 & R307-165)

II.B.2.e.2 **Recordkeeping:**

Results of all monitoring shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.2.e.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3 **Conditions on Natural Gas Turbine Compressor (2)**

II.B.3.a **Condition:**

Visible emissions shall be no greater than 10 % opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.3.a.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.3.a.2 **Recordkeeping:**

In lieu of monitoring via visible emission observations, the permittee shall keep one of the following sets of records for each affected emission unit, as applicable:

(1) Documentation that the emission unit can only burn pipeline quality natural gas;
(2) Documentation that the fuels other than pipeline quality natural gas cannot be supplied to the emission unit without modification of the fuel supply system; or
(3) Fuel bills or fuel meter readings that demonstrate only pipeline quality natural gas are combusted in the emission unit.

The permittee shall keep a log, which includes the location and description of each affected emission unit. For each affected emission unit the log shall include the type of records that will be used in lieu of monitoring via visible emission observations. If fuel bills or fuel meter readings will be used in lieu of monitoring via visible emission observations, the permittee shall review fuel bills or fuel meter readings once per quarter and record in the log the types of fuel combusted. The records and log required by this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.b **Condition:**

Emissions of CO shall be no greater than 5.9 lb/hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.3.b.1 **Monitoring:**

A. CO emission testing shall be performed on each affected unit at least once every three years based on the date of the most recent test, using a portable analyzer or testing instrument capable of detection emissions of the pollutant being tested at the concentrations necessary to determine compliance. The tested unit shall be operated under normal conditions and at a minimum of 90% of the maximum production or throughput achieved since the last required test. A testing protocol shall be developed, documented, and used for all tests. At a minimum, the following topics shall be addressed in the protocol:

(a) A description of sampling locations and sample gathering procedures that result in representative and reproducible samples.

(b) Calibration and operation procedures for the analyzer.

(c) Methods used to determine the flow rate, temperature, and other parameters as necessary to demonstrate compliance.

(d) Calculations and other information necessary to convert the analyzer output to the units of the limitation.

The test protocol shall be made available to the Executive Secretary upon request. If the Executive Secretary determines that the protocol does not adequately address the minimum requirements list above, or that the protocol does not provide sufficient assurance that the test results are adequate for demonstrating compliance with the limitation, the Executive Secretary may require the permittee to modify the protocol.

or

B. Stack testing shall be performed as specified here:

(a) Frequency. The unit shall be tested every five years using stack tests. Tests may also be required, if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall submit a copy of this test protocol and notify the Executive Secretary of the date, time, and place of testing. The source test protocol shall be approved by the Executive Secretary prior to the test(s). The source test protocol shall show the proposed test methodologies, stack(s) to be tested. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1 or other methods as approved by the Executive Secretary. In addition, Occupational Safety and Health

Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

(d) Methods.

(1) 40 CFR 60, Appendix A, Method 10 shall be used to determine CO emissions.

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.3.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.b.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.c **Condition:**

Sulfur content of fuel shall be no greater than 0.8 % by weight. [Authority granted under 40 CFR 60.333 (Subpart GG); condition originated in 40 CFR 60.333 (Subpart GG)]

II.B.3.c.1 **Monitoring:**

Fuel sulfur content shall be determined using approved ASTM reference methods, or an approved alternative method. The approved reference methods are: ASTM D1072-80, ASTM D3031-81, ASTM D3246-81, ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The Gas Processors Association (GPA) document "Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes", GPA Standard 2377-86 is an approved alternative method.

1. Sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, sulfur monitoring shall be conducted once per quarter for six quarters.

2. If after the monitoring required in item 1, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per year: during first and third quarters of each calendar year.

3. If any sulfur analysis as required in items 1 and 2 above indicate noncompliance with 40 CFR 60.333, the owner/operator shall notify the EPA Region VIII and the Utah State DEQ, DAQ of such excess emissions and the custom schedule shall be re-examined by the EPA Region VIII. Sulfur monitoring shall be conducted weekly during this period when custom fuel schedule monitoring is being re-examined.

4. Stationary gas turbines that use the same supply of pipeline quality natural gas to fuel multiple gas turbines may monitor the fuel sulfur content at a single location. (origin: letter from EPA dated 08/27/2002)

II.B.3.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.c.3 **Reporting:**

The results of the testing shall be submitted semi-annually to the Executive Secretary and to EPA. All reports shall be in accordance with Provision I.S.2 of this permit.

II.B.3.d **Condition:**

Emissions of NO_x shall be no greater than 8.1 lb/hr and 42 ppmdv @ 15% O_2. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.3.d.1 **Monitoring:**

A. NO_x emission testing shall be performed on each affected unit at least once every three years from the most recent test using a portable analyzer or testing instrument capable of detection emissions of the pollutant being tested at the concentrations necessary to determine compliance. The tested unit shall be operated under normal conditions and at a minimum of 90% of the maximum production or throughput achieved since the last required test. A testing protocol shall be developed, documented, and used for all tests. At a minimum, the following topics shall be addressed in the protocol:

(a) A description of sampling locations and sample gathering procedures that result in representative and reproducible samples.

(b) Calibration and operation procedures for the analyzer.

(c) Methods used to determine the flow rate, temperature, and other parameters as necessary to demonstrate compliance.

(d) Calculations and other information necessary to convert the analyzer output to the units of the limitation.

The test protocol shall be made available to the Executive Secretary upon request. If the Executive Secretary determines that the protocol does not adequately address the minimum requirements list above, or that the protocol does not provide sufficient assurance that the test results are adequate for demonstrating compliance with the limitation, the Executive Secretary may require the permittee to modify the protocol.

or

B. Stack testing shall be performed as specified here:

(a) Frequency. The unit shall be tested every five years using stack tests. Tests may also be required, if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall submit a copy of the test protocol and notify the Executive Secretary of the date, time, and place of testing. The source test protocol shall be approved by the Executive Secretary prior to the test(s). The source test protocol shall show the proposed test methodologies, stack(s) to be tested. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1 or other methods as approved by the Executive Secretary. In addition, Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

(d) Methods.

(1) 40 CFR 60, Appendix A, Methods 20, or 7, 7A, 7B, 7C, 7D, 7E shall be used to determine NO_x emissions.

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (origin: R307-401-6 (BACT))

II.B.3.d.2 **Recordkeeping:**

Results of all monitoring shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.3.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.e **Condition:**

Emissions of NO_x shall not be greater than the concentration calculated by the equation

STD = 0.0150 (14.4/Y) + F where

STD is the allowable NO_x emission in percent by volume, dry, at 15 percent oxygen;
0.0150 is the base emission standard, in percent by volume;
Y is the ratio of fuel consumption (in kJ/hr) over output power (in watts), with Y not to exceed 14.4 (dimensionless); and
F is an allowance for the fuel-bound nitrogen as determined by the following table:

Fuel-bound nitrogen, N, wt%	F, NO_x percent by volume
N<0.015	0
0.015<N<=0.1	0.04N
0.1<N<=0.25	0.004 + 0.0067(N - 0.1)
N>0.25	0.005.

[Authority granted under 40 CFR 60.332 (Subpart GG); condition originated in 40 CFR 60.333 (Subpart GG)]

II.B.3.e.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at least once every five years based on the date of the most recent stack test, or at any other time if directed by the Executive Secretary. If a turbine covered by this condition is replaced, the new turbine shall be tested within 60 days of reaching maximum capacity, but not later than 180 days after initial startup.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d) Methods

(1) 40 CFR 60, Appendix A, Method 20 shall be used to determine the nitrogen oxides and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen;

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine stack gas velocity and volumetric flow rate;

(3) Fuel-bound nitrogen content shall be assumed to be 0 wt%, in accordance with EPA guidance document EMTIC GD-009 dated 3/12/90;

(e) Calculations. The nitrogen oxides emission rate (NO_x) shall be computed for each run using the following equation:

$NO_x=(NO_{xo})\ (Pr/Po)0.5\ e^{19(Ho-0.00633)\ (288°K/Ta)1.53}$ where:

NO_x = emission rate of NO_x at 15% O_2 and ISO standard ambient conditions, volume percent.
NO_{xo} = observed NO_x concentration, ppm by volume.
Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
Po = observed combustor inlet absolute pressure at test, mm Hg.
Ho = observed humidity of ambient air, g H_2O/g air.
e = transcendental constant, 2.718.
Ta = ambient temperature, °K.

To determine mass emission rates (lb/hr, etc.), the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The operational rate during all compliance testing shall be no less than 90% of the maximum rate achieved in the previous three (3) years (origin: 40 CFR 60.335(c), 40 CFR 60.8 & R307-165)

II.B.3.e.2 **Recordkeeping:**

Results of all monitoring shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.3.e.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4 **Conditions on Natural Gas Turbine Compressor (3)**

II.B.4.a **Condition:**

Visible emissions shall be no greater than 10 % opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.4.a.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.4.a.2 **Recordkeeping:**

In lieu of monitoring via visible emission observations, the permittee shall keep one of the following sets of records for each affected emission unit, as applicable:

(1) Documentation that the emission unit can only burn pipeline quality natural gas;
(2) Documentation that the fuels other than pipeline quality natural gas cannot be supplied to the emission unit without modification of the fuel supply system; or
(3) Fuel bills or fuel meter readings that demonstrate only pipeline quality natural gas are combusted in the emission unit.

The permittee shall keep a log, which includes the location and description of each affected emission unit. For each affected emission unit the log shall include the type of records that will be used in lieu of monitoring via visible emission observations. If fuel bills or fuel meter readings will be used in lieu of monitoring via visible emission observations, the permittee shall review fuel bills or fuel meter readings once per quarter and record in the log the types of fuel combusted. The records and log required by this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.b **Condition:**

Emissions of CO shall be no greater than 6.3 lb/hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.4.b.1 **Monitoring:**

A. CO emission testing shall be performed on each affected unit at least once every three years based on the date of the most recent test, using a portable analyzer or testing instrument capable of detection emissions of the pollutant being tested at the concentrations necessary to determine compliance. The tested unit shall be operated under normal conditions and at a minimum of 90% of the maximum production or throughput achieved since the last required test. A testing protocol shall be developed, documented, and used for all tests. At a minimum, the following topics shall be addressed in the protocol:

(a) A description of sampling locations and sample gathering procedures that result in representative and reproducible samples.

(b) Calibration and operation procedures for the analyzer.

(c) Methods used to determine the flow rate, temperature, and other parameters as necessary to demonstrate compliance.

(d) Calculations and other information necessary to convert the analyzer output to the units of the limitation.

The test protocol shall be made available to the Executive Secretary upon request. If the Executive Secretary determines that the protocol does not adequately address the minimum requirements list above, or that the protocol does not provide sufficient assurance that the test results are adequate for demonstrating compliance with the limitation, the Executive Secretary may require the permittee to modify the protocol.

or

B. Stack testing shall be performed as specified here:

(a) Frequency. The unit shall be tested every five years using stack tests. Tests may also be required, if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall submit a copy of this test protocol and notify the Executive Secretary of the date, time, and place of testing. The source test protocol shall be approved by the Executive Secretary prior to the test(s). The source test protocol shall show the proposed test methodologies, stack(s) to be tested. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1 or other methods as approved by the Executive Secretary. In addition, Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

(d) Methods.

(1) 40 CFR 60, Appendix A, Method 10 shall be used to determine CO emissions.

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.4.b.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.b.3 **Reporting:**

The results of stack testing shall be submitted to the Executive Secretary within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.c **Condition:**

Sulfur content of fuel shall be no greater than 0.8 % by weight. [Authority granted under 40 CFR 60.333 (Subpart GG); condition originated in 40 CFR 60.333 (Subpart GG)]

II.B.4.c.1 **Monitoring:**

Fuel sulfur content shall be determined using approved ASTM reference methods, or an approved alternative method. The approved reference methods are: ASTM D1072-80, ASTM D3031-81, ASTM D3246-81, ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The Gas Processors Association (GPA) document "Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes", GPA Standard 2377-86 is an approved alternative method.

1. Sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, sulfur monitoring shall be conducted once per quarter for six quarters.

2. If after the monitoring required in item 1, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per year: during first and third quarters of each calendar year.

3. If any sulfur analysis as required in items 1 and 2 above indicate noncompliance with 40 CFR 60.333, the owner/operator shall notify the EPA Region VIII and the Utah State DEQ, DAQ of such excess emissions and the custom schedule shall be re-examined by the EPA Region VIII. Sulfur monitoring shall be conducted weekly during this period when custom fuel schedule monitoring is being re-examined.

4. Stationary gas turbines that use the same supply of pipeline quality natural gas to fuel multiple gas turbines may monitor the fuel sulfur content at a single location. (origin: letter from EPA dated 08/27/2002)

II.B.4.c.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.c.3 **Reporting:**

The results of the testing shall be submitted semi-annually to the Executive Secretary and to EPA. All reports shall be in accordance with Provision I.S.2 of this permit.

II.B.4.d **Condition:**

Emissions of NO_x shall be no greater than 8.7 lb/hr and 42 ppmdv @ 15% O_2. [Authority granted under 40 CFR 60.335c; condition originated in DAQE-424-01]

II.B.4.d.1 **Monitoring:**

A. NO_x emission testing shall be performed on each affected unit at least once every three years from the most recent test using a portable analyzer or testing

instrument capable of detection emissions of the pollutant being tested at the concentrations necessary to determine compliance. The tested unit shall be operated under normal conditions and at a minimum of 90% of the maximum production or throughput achieved since the last required test. A testing protocol shall be developed, documented, and used for all tests. At a minimum, the following topics shall be addressed in the protocol:

(a) A description of sampling locations and sample gathering procedures that result in representative and reproducible samples.

(b) Calibration and operation procedures for the analyzer.

(c) Methods used to determine the flow rate, temperature, and other parameters as necessary to demonstrate compliance.

(d) Calculations and other information necessary to convert the analyzer output to the units of the limitation.

The test protocol shall be made available to the Executive Secretary upon request. If the Executive Secretary determines that the protocol does not adequately address the minimum requirements list above, or that the protocol does not provide sufficient assurance that the test results are adequate for demonstrating compliance with the limitation, the Executive Secretary may require the permittee to modify the protocol.

or

B. Stack testing shall be performed as specified here:

(a) Frequency. The unit shall be tested every five years using stack tests. Tests may also be required, if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall submit a copy of the test protocol and notify the Executive Secretary of the date, time, and place of testing. The source test protocol shall be approved by the Executive Secretary prior to the test(s). The source test protocol shall show the proposed test methodologies, stack(s) to be tested. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1 or other methods as approved by the Executive Secretary. In addition, Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

(d) Methods.

(1) 40 CFR 60, Appendix A, Methods 20, or 7, 7A, 7B, 7C, 7D, 7E shall be used to determine NO_x emissions.

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (origin: R307-401-6 (BACT))

II.B.4.d.2 **Recordkeeping:**

Results of all monitoring shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.4.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.e **Condition:**

Emissions of NO_x shall not be greater than the concentration calculated by the equation

STD = 0.0150 (14.4/Y) + F where

STD is the allowable NO_x emission in percent by volume, dry, at 15 percent oxygen;
0.0150 is the base emission standard, in percent by volume;
Y is the ratio of fuel consumption (in kJ/hr) over output power (in watts), with Y not to exceed 14.4 (dimensionless); and
F is an allowance for the fuel-bound nitrogen as determined by the following table:

Fuel-bound nitrogen, N, wt%	F, NO_x percent by volume
N<0.015	0
0.015<N<=0.1	0.04N
0.1<N<=0.25	0.004 + 0.0067(N - 0.1)
N>0.25	0.005.

[Authority granted under 40 CFR 60.332 (Subpart GG); condition originated in 40 CFR 60.333 (Subpart GG)]

II.B.4.e.1 **Monitoring:**

Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested at least once every five years based on the date of the most recent stack test, or at any other time if directed by the Executive Secretary. If a turbine covered by this condition is replaced, the new turbine shall be tested within 60 days of reaching maximum capacity, but not later than 180 days after initial startup.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of

the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d) Methods

(1) 40 CFR 60, Appendix A, Method 20 shall be used to determine the nitrogen oxides and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen;

(2) 40 CFR 60, Appendix A, Method 2 shall be used to determine stack gas velocity and volumetric flow rate;

(3) Fuel-bound nitrogen content shall be assumed to be 0 wt%, in accordance with EPA guidance document EMTIC GD-009 dated 3/12/90;

(e) Calculations. The nitrogen oxides emission rate (NO_x) shall be computed for each run using the following equation:

$NO_x=(NO_{xo})\ (Pr/Po)0.5\ e^{19(Ho-0.00633)\ (288°K/Ta)1.53}$ where:

NO_x = emission rate of NO_x at 15% O_2 and ISO standard ambient conditions, volume percent.
NO_xo = observed NO_x concentration, ppm by volume.
Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
Po = observed combustor inlet absolute pressure at test, mm Hg.
Ho = observed humidity of ambient air, g H_2O/g air.
e = transcendental constant, 2.718.
Ta = ambient temperature, °K.

To determine mass emission rates (lb/hr, etc.), the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The operational rate during all compliance testing shall be no less than 90% of the maximum rate achieved in the previous three (3) years (origin: 40 CFR 60.335(c), 40 CFR 60.8 & R307-165)

II.B.4.e.2 **Recordkeeping:**

Results of all monitoring shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.4.e.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5 **Conditions on Back-up Generator (4)**

II.B.5.a **Condition:**

Hours of operation for maintenance firing purposes shall be no greater than 500 hours per rolling 12 month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.5.a.1 **Monitoring:**

Compliance with the limitation shall be determined on a rolling 12-month total. Based on the first day of each month a new 12-month total shall be calculated using data from the previous 12 months. Records documenting generator's hours shall be kept in a log for all periods when the plant in operation. Engine hours of operation shall be determined by examination of maintenance records, which shall be kept on a site.

II.B.5.a.2 **Recordkeeping:**

Records will be maintained in accordance with Provision I.S.1 of this permit. Records documenting generator's hours shall be kept in a log for all periods when the plant is in operation. These records shall show the date of use and the reason of usage.

II.B.5.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.b **Condition:**

Emergency generators shall be used for electricity production only during periods when electric power from the public utilities is interrupted. [Authority granted under R307-401-6(1) (BACT); condition originated in DAQE-424-01]

II.B.5.b.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.5.b.2 **Recordkeeping:**

Records documenting generator usage shall be kept in a log and they shall show the date the generator was used, the duration in hours of the of generator usage, the amount of fuel consumed, and the reason for each generator usage. Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.5.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.c **Condition:**

Visible emissions shall be no greater than 10 % opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-424-01]

II.B.5.c.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.5.c.2 **Recordkeeping:**

In lieu of monitoring via visible emission observations, the permittee shall keep one of the following sets of records for each affected emission unit, as applicable:

(1) Documentation that the emission unit can only burn pipeline quality natural gas;
(2) Documentation that the fuels other than pipeline quality natural gas cannot be supplied to the emission unit without modification of the fuel supply system; or
(3) Fuel bills or fuel meter readings that demonstrate only pipeline quality natural gas are combusted in the emission unit.

The permittee shall keep a log, which includes the location and description of each affected emission unit. For each affected emission unit the log shall include the type of records that will be used in lieu of monitoring via visible emission observations. If fuel bills or fuel meter readings will be used in lieu of monitoring via visible emission observations, the permittee shall review fuel bills or fuel meter readings once per quarter and record in the log the types of fuel combusted. The records and log required by this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C. **Emissions Trading.**

(R307-415-6a(10))

Not applicable to this source.

II.D. **Alternative Operating Scenarios.**

(R307-415-6a(9))

Not applicable to this source.

Section III: PERMIT SHIELD

A permit shield was not granted for any specific requirements.

Section IV: ACID RAIN PROVISIONS.

This source is not subject to Title IV. This section is not applicable.

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

DAQE-424-01 dated June 18, 2001

1. **Comment on an item originating in 40 CFR 60 Subpart GG regarding permitted source (Source-wide)**

   Definition of ISO standard day conditions: These are defined in the subpart as 288 K, 60 % relative humidity, and 101.3 kPa (58.7° F, 14.7 psia, 60% relative humidity). [Comment last updated on 11/05/2003]

2. **Comment on an item originating in DAQE-424-01 regarding permitted source (Source-wide)**

   Conditions #1-7, and 9: Are NSR informational and administrative items that are not required to be carried forth into this Title V permit [Comment last updated on 11/05/2003]

3. **Comment on an item originating in DAQE-424-01 regarding permitted source (Source-wide)**

   Conditions #17-20: Contain requirements for inventory, unavoidable breakdown, and annual emission fees. These AO requirements are carried over into Section I of the Title V operating permit [Comment last updated on 11/05/2003]

4. **Comment on an item originating in 40 CFR 60 Subpart GG regarding permitted source (Source-wide)**

   Requirement to monitor sulfur content of turbine fuel (40 CFR 60.334(b)(2): Oak Spring Compressor Station has submitted and received approval from EPA for a custom fuel monitoring schedule dated August 27, 2002. Conditions in this permit reflect the letter contents. [Comment last updated on 10/14/2003]

5. **Comment on an item originating in 40 CFR 60 Subpart GG regarding permitted source (Source-wide)**

   Monitoring of fuel nitrogen content: Oak Spring Compressor Station has submitted and received approval from EPA dated August 27, 2002 that monitoring of fuel nitrogen content is not required while: 1) natural gas is the only fuel fired in the gas turbine, 2) not fired with any emergency fuel, 3) not supplied its fuel from an intermediate bulk storage tank. [Comment last updated on 11/06/2003]

6. **Comment on an item originating in DAQE-424-01 regarding permitted source (Source-wide)**

   Natural gas for fuel: The requirement to burn natural gas is not listed in this permit because the equipment uses natural gas by design. This design feature is noted in the emission unit description. [Comment last updated on 11/06/2003]

7. Comment on an item originating in DAQE-424-01 regarding Back-up Generator (Unit 4)

Log information: The same log is required for both conditions on back-up generator:1) hours of operation maintenance firing purposes and 2) usage during emergency. [Comment last updated on 11/24/2003]